10/632,083 Page 1

=> d his

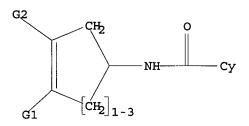
(FILE 'HOME' ENTERED AT 11:50:53 ON 08 MAR 2006) /

FILE 'REGISTRY' ENTERED AT 11:51:02 ON 08 MAR 2006
L1 STRUCTURE UPLOADED
L2 STRUCTURE UPLOADED
L3 STRUCTURE UPLOADED

L4 STRUCTURE UPLOADED
L5 0 S L1 OR L2 OR L3 OR L4
L6 51 S L5 FULL

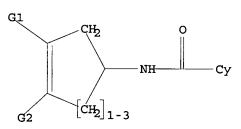
FILE 'CAPLUS' ENTERED AT 11:53:22 ON 08 MAR 2006 L7 10 S L6

=> d que 17 stat L1 STR



G1 O,S,N G2 C,O,S,N

Structure attributes must be viewed using STN Express query preparation. L2 STR



G1 O,S,N G2 C,O,S,N

Structure attributes must be viewed using STN Express query preparation. $\tt L3$ STR

$$CH_2$$
 O CH_2 O CY CY CY

G1 O,S,N G2 C,O,S,N Structure attributes must be viewed using STN Express query preparation. L4

G1 C,N

Structure attributes must be viewed using STN Express query preparation. L6 $\,$ 51 SEA FILE=REGISTRY SSS FUL L1 OR L2 OR L3 OR L4

L7 10 SEA FILE=CAPLUS ABB=ON PLU=ON L6

=> d 1-10 bib abs hitstr

ANSWER 1 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN 2006:101042 CAPLUS AN DN 144:169674 DN 144:169674

Biocatalytic process for preparing enantiomerically enriched pramipexole
IN Valivety, Rao H.: Michels, Peter C.: Pantaleone, David P.: Khmelnitsky,
Yuri L.

Amz Technology, Inc., USA
OCDEN: PIXXD2
Patent
LA English
FAN.CNT 1
PATENT NO. KIND DATE APPLICATION NO. DATE KIND A2 20060202 W0 2005-U322417
AM, AT, AU, AZ, BA, BB, BG, BR, BW,
CU, CZ, DE, DK, DM, DZ, EC, EE, EG,
RR, HU, ID, IL, IN, IS, JP, KE, KG,
LS, LT, LU, LV, MA, MD, MG, MK, MN,
NZ, OM, PG, PH, PL, PT, RO, RU, SC,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, WO 2006012277 A2 20060202 WO 2005-US22417 20050623

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, LL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, KM, MM, MK, MX, MA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RN: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BP, BJ, CF, CG, CI, CM, GA, GM, CQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, CM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ M 20050623 WO 2006012277 pramipexole precursors are disclosed. 874658-82-9 RL: BCP (Biochemical process); RCT (Reactant); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent) (biocatalytic process for preparing enantiomerically enriched pramipexole)
RN 874658-82-9 CAPLUS
CN Benzamide, N-(2-amino-4,5,6,7-tetrahydro-6-benzothiazolyl)- (9CI) (CA INDEX NAME)

ANSWER 2 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

Title compds. I [X = CH(NHR2), NR2a; R1 = COR3, COOR4; R2, R2a = COR5, SO2R6; R3 = alkyl with provisos; R4 = (un)substituted aryl, heteroaryl;

SO2R6; R3 = alkyl with provisos; R4 = (un)substituted aryl, heteroaryl;
R5

= alkyl with provisos; R6 = NR10R11; R10, R11 = alkyl] and their pharmaceutically acceptable salts were prepared For example, sequential Boc-deprotection of amine II and N-acylation with 3-trifluorobenzoic acid afforded claimed quinazolinamine in 55% yield. In norepinephrine reuptake

assays, 51-examples of compds. I at 10 µM exhibited 29-96% inhibition.

R58196-57-89 869197-00-2P 869197-00-P0

869197-09-19 869197-15-09 869197-03-P0

869197-35-18 869197-06-4P 869197-63-P0

869198-50-59 869198-06-19 869198-00-P0

869198-79-59 869198-06-19 869198-00-P0

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(Uses)

(Use)

RN 86919-67-8 CAPLUS

CN 2-Thiophenecarboxamide, N-(5,6,7,8-tetrahydro-6-[(3,4,5-trimethoxybenzoyl)amino]-2-quinazolinyl]- (SCI) (CA INDEX NAME)

869197-00-2 CAPLUS

ANSWER 2 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN 2005:1200420 CAPLUS 143:460176 Preparation of 5,6,7,8-tetrahydro-2-quinazolinamines and related unds ounds
as norepinephrine reuptake inhibitors
Oberboersch, Stefan; Sundermann, Bernd; Sundermann, Corinna; Haurand,
Michael; Hennies, Hagen-Heinrich; Bijsterveld, Edward
Gruenenthal G.m.b.H., Germany
PCT Int. Appl., 193 pp.
CODEN: PIXXD2
Patent
German
CNT 1 IN DΤ FAN.CNT 1 PATENT NO. KIND DATE APPLICATION NO. DATE AE, AG, AL, AM, AT, AU, AZ, BA, CN, CO, CR, CU, C2, DK, DM, D2, GH, GR, HR, HU, ID, IL, IN, IS, LK, LR, LS, LT, LU, LV, MA, MD, NZ, GM, FG, PH, PL, PT, RO, SY, TJ, TM, TN, TR, TT, TZ, UA, 20050427 WO 2005105759 WO 2005-EP4489 Ρī EP4489 20050427 BR, BW, BY, BZ, CA, CH, EG, ES, FI, GB, GD, GE, KG, KM, KP, KR, KZ, LC, NN, MW, MX, MZ, NA, NI, SD, SE, SG, SK, SL, SM, UZ, VC, VN, YU, ZA, ZM, WO 2005-P BB, BG, EC, EE, JP, KE, MG, MK, RU, SC, UG, US, RW: BW, GH, GM, KE, AZ, BY, KG, KZ, EE, ES, FI, FR, RO, SE, SI, SK, MR, NE, SN, TD, DE 102004020908 A1 PRAI DE 2004-102004020908 A OS MARPAT 143:460176 LS, MW, MZ, NA, SD, SL, SZ, TZ, MD, RU, TJ, TM, AT, BE, BG, CH, GB, GR, HU, IE, IS, IT, LT, LU, TR, BF, BJ, CF, CG, CI, CM, GA, TG UG, CY, MC, GN, ZM, ZW, AM, CZ, DE, DK, NL, PL, PT, GQ, GW, ML, 20051117 20040428 DE 2004-102004020908 20040428

ANSWER 2 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
3-Furancarboxamide,
1-dimethylethyl)-2-methyl-N-[5,6,7,8-tetrahydro-6[(2-thienylcarbonyl)amino]-2-quinazolinyl]- (9CI) (CA INDEX NAME)

869197-02-4 CAPLUS
Benzoic acid, 2-[[[5,6,7,8-tetrahydro-2-[(2-thienylcarbonyl)amino]-6quinazolinyl]amino]carbonyl]-, phenylmathyl ester (9CI) (CA INDEX NAME)

869197-09-1 CAPLUS
4-0xazolecarboxamide, 5-phenyl-N-[5,6,7,8-tetrahydro-2-[(2-thienylcarbonyl)amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

869197-15-9 CAPLUS 4-Pyridinecarboxamide, 2-chloro-N-[5,6,7,8-tetrahydro-2-[(2-thienylcarbonyl)amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

869197-40-0 CAPLUS

ANSWER 2 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN (Continued) 2-Thiophenecarboxamide, 5-methyl-n-16,6,7,8-tetrahydro-2-{[1-oxobutyl)amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & \\ & & \\ & & \\ \end{array}$$

869197-45-5 CAPLUS
2-Thiophenecarboxamide, N-{6-{(3,5-difluorobenzoyl)amino}-5,6,7,8-tetrahydro-2-quinazolinyl}- (9CI) (CA INDEX NAME)

869197-60-4 CAPLUS
2-Thiophenecarboxamide, N-{6-{(4-bromo-3-methylbenzoyl)amino}-5,6,7,8-tetrahydro-2-quinazolinyl}- {9Cl} (CA INDEX NAME)

869197-63-7 CAPLUS Benzamide, 2,6-difluoro-N-[5,6,7,8-tetrahydro-2-[(1-oxobutyl)amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

869197-75-1 CAPLUS 2-Furancarboxamide, 5-(phenylmethyl)-N-{5,6,7,8-tetrahydro-2-{(1-

L7 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

RN 869198-59-4 CAPLUS
CN 4-Thiazolecarboxamide,
N-{5,6,7,8-tetrahydro-6-{[2-thienylcarbonyl)amino}2-quinazolinyl}-2-(2-thienyl)- (9CI) (CA INDEX NAME)

RN 869198-62-9 CAPLUS
CN 2-Thiophenecarboxamide,
N-[6-[(2-chloro-5-(trifluoromethyl)benzoyl)amino]5,6,7,8-tetrahydro-2-quinazolinyl)- (9CI) (CA INDEX NAME)

869198-77-6 CAPLUS
2-Thiophenecarboxamide, N-[5,6,7,8-tetrahydro-6-[[2-(trifluoromethyl)benzoyl]amino]-2-quinazolinyl]- [9CI) (CA INDEX NAME)

RN 869198-80-1 CAPLUS
CN 2-Thiophenecarboxamide,
N-[5,6,7,8-tetrahydro-6-[(2-methylbenzoyi)amino]-2quinazolinyi]- (9C1) (CA INDEX NAME)

L7 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN (Continued) oxobutyl)amino|-6-quinazolinyl|- (9CI) (CA INDEX NAME)

869198-08-3 CAPLUS Benzamide, N-[2-[(4-fluorobenzoyl)amino]-5,6,7,8-tetrahydro-6-quinazolinyl)-2,5-dimethyl- (9CI) (CA INDEX NAME)

869198-40-3 CAPLUS
3-Pyridinecarboxamide,
-[(4-fluorobenzoyl)amino]-5,6,7,8-tetrahydro-6quinazolinyl]-2-methyl-6-(trifluoromethyl)- (9CI) (CA INDEX NAME)

$$F_3 \stackrel{\circ}{\underset{\mathsf{Me}}{\overset{\circ}{\longrightarrow}}} \stackrel{\circ}{\underset{\mathsf{C-NH}}{\overset{\circ}{\longrightarrow}}} \stackrel{\mathsf{NH-C}}{\underset{\mathsf{N}}{\overset{\circ}{\longrightarrow}}} \stackrel{\circ}{\underset{\mathsf{NH-C}}{\overset{\circ}{\longrightarrow}}} \stackrel{\mathsf{F}}{\underset{\mathsf{NH-C}}{\overset{\circ}{\longrightarrow}}} \stackrel{\mathsf{F}}{\underset{\mathsf{NH-C}}{\overset{\mathsf{NH-C}}}{\overset{\mathsf{NH-C}}{\overset{\mathsf{NH-C}}{\overset{\mathsf{NH-C}}{\overset{\mathsf{NH-C}}{\overset{\mathsf{NH-C}}}{\overset{\mathsf{NH-C}}{\overset{\mathsf{NH-C}}}{\overset{\mathsf{NH-C}}{\overset{\mathsf{NH-C}}}{\overset{\mathsf{NH-C}}}{\overset{\mathsf{NH-C}}{\overset{\mathsf{NH-C}}}{\overset{\mathsf{NH-C}}}{\overset{\mathsf{N$$

869198-50-5 CAPLUS 2-Furancarboxamide, 5-(phenylmethyl)-N-[5,6,7,8-tetrahydro-6-[(2-thienylcarbonyl)amino]-2-quinazolinyl]- (9C1) (CA INDEX NAME)

L7 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2006 ACS ON STN 869198-89-0 CAPLUS
CN 2-Thiophenecarboxamide,
N-[6-{(2-bromobenzoyl)amino}-5,6,7,8-tetrahydro-2-quinazolinyl]- (9CI) (CA INDEX NAME) (Continued)

THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 3 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN 2005:44313 CAPLUS 142:261363

142:261363
Solid-phase synthesis of substituted 3-amino-3'carboxytetrahydrocarbazoles
Koppitz, Marcus; Reinhardt, Gabriele; van Lingen, Anneke
Automated Medicinel Chemistry, Schering AG, Berlin, 13342, Germany
Tetrahedron Letters (2005), 46(6), 911-914
CODEN: TELEAY; ISSN: 0040-4039
Elsevier B.V.
Journal
English
CASREACT 142:261363

PB DT LA

CASRRACT 142:261363
Two related solid-phase synthesis routes have been developed allowing the synthesis of 3-amino-3'-carboxy substituted tetrahydrocarbazole derivs. Diversity can be introduced at the amino and carboxy functionalities and at the nitrogen and the aromatic ring of the tetrahydrocarbazole moiety. Both routes rely on Fmoc-protected 1-amino-4-oxocyclohexanecarboxylic

Both routes rely on Fmoc-protected 1-amino-4-oxocyclohexanecarboxylic acid
acid
as central core element. Derivatization of the carboxy function is achieved with amines; derivatization of the amino functionality is possible by reaction with alkyl halides, isocyanates, activated alcs., sulfonic acid chlorides or carboxylic acids. The tetrahydrocarbazole scaffold is generated by Fischer indole cyclization with phenylhydrazine derivs. thereby introducing diversity in the aromatic moiety.
N-Alkylation
at the indole nitrogen with alkyl halides delivers N-substituted derivs.

1T 846567-76-8 846567-77-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(solid-phase synthesis of substituted 3-amino-3'-carboxytetrahydrocarbazoles via two related routes involving Fischer indole cyclization and further functionalization)

RN 846567-76-8 CAPJUS
CN 1H-Carbazole-3-carboxamide, 5-chloro-3-{(3-fluoro-2-methylbenzoyl)amino]-2,3,4,3-tetrahydro-N-[2-(4-hydroxyphenyl)ethyl)- (SCI) (CA INDEX NAME)

ANSWER 4 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN APPLICANT 2004:117214 CAPLUS 140:163869
Preparation of acylated, heteroaryl-condensed cycloalkenylamines for treatment of Cardiovascular disorders
Strobel, Hartmut; Wohlfart, Paulus
Aventis Pharma Deutschland GmbH, Germany
EUr. Pat. Appl., 35 pp.
CODEN: EPXXDM
Patent
English
I.CNT 1
PATENT NO. KIND DATE APPLICATION NO. DATE DT LA FAN. PRAI

The title compds. (I) [the ring A = an aromatic 5-membered or 6-membered

containing 1 or 2-nitrogen atoms as ring heteroatoms, or an aromatic

ring containing 1 ring heteroatom which is an oxygen atom or a sulfur atom or

L7 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN

846567-77-9 CAPLUS

lH-Carbazole-3-carboxamide, 8-(aminosulfonyl)-2,3,4,9-tetrahydro-3-[[{1-oxido-3-pyridinyl)carbonyl]amino]-N-[2-(2-thienyl)ethyl]- (9CI) (CA INDEX NAME)

RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 4 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN (Continued) 2 ring heteroatoms one of which is a nitrogen atom and the other of is an oxygen atom or a sulfur atom; R1, R4 = H, each (un)substituted

alkyl, C2-10 alkenyl, or C2-10 alkynyl, COR9, CONR10R11, CO2R12, C halogens, cyano, NR13R14, OR1, S(O)mR16, SO2NR17R18, NO2; R1 and R

the halogen, cyano or NO2 if R1 or R4 is bonded to a ring nitrogen atom; R2, R3 = H, halogens, cyano, (un)substituted C1-10 alkyl, PhCONH,

Phso2-0, (C1-6 alkyl)-CO, or PhCO, OH, C1-10 alkoxy, PhO, S(O)mR19, CF3, cyano, NO2, C1-10 alkylamino, di(C1-10 alkyl)amino, (C1-6 alkyl)-CONH; but R2

R3 cannot be halogen, cyano or NO2 if R2 or R3 is bonded to a ring nitrogen atom; R5 = (un)substituted Ph, naphth-1-y1, naphth-2-y1, became to 10-membered, arom., monocyclic or bicyclic heterocycle contg, one or more heteroatoms selected from the group consisting of N, O and S; R9 = (un)substituted C1-10 alkyl; R10, R12, R17 = H, (un)substituted C1-10 alkyl; R11, R18 = H, C1-10 alkyl; R13, R14 = H,

C1-6 alkyl, each (un) substituted Ph, benzyl, heteroaryl, (C1-6 alkyl)-CO; R16

(un) substituted C1-10 alkyl, CF3, each (un) substituted Ph or heteroaryl;

= 0, 1, 2; n = 1, 2, 3] are prepd. These compds. upregulate the expression of the enzyme endothelial nitric oxide (NO) synthase and can

= 0, 1, 2; n = 1, 2, 3] are prepd. These compds. upregulate the expression of the enzyme endothelial nitric oxide (NO) synthase and can applied in conditions in which an increased expression of said enzyme or an increased NO level or the normalization of a decreased NO level is desired. They are useful in the treatment of various disease states including cardiovascular disorders such as atherosclerosis, thrombosis, coronary artery disease, hypertension, and cardiac insufficiency. The diseases also include stable or unstable angina pectoris, coronary heart disease, Prinzmetal angina, acute coronary syndrome, heart failure, myocardial infarction, stroke, peripheral artery occlusive disease, endothelial dysfunction, restenosis, endothelial damage after PT-CA, essential hypertension, pulmonary hypertension, secondary hypertension, renovascular hypertension, chronic glomerulonephritis, erectile dysfunction, ventricular arrhythmia, diabetes, diabetes complications, nephropathy, retinopathy, anglogenesis, asthma bronchiale, chronic renal failure, cirthosis of the liver, osteoprosis, restricted memory performance or a restricted ability to learn, or for the lowering of cardiovascular risk of postmenopausal women or of women taking contraceptives. For example, 2,4-dimethyl-N-(6,7,8,9-tetrahydro-5H-cyclohepta[b]pyridin-8-yl)bernamide (SI) inhibited activation of human endothelial nitric oxide synthetase gene cloned in human endothelial cell line with ECSO of 0.054 µM.

654675-40-8P, (R)-N-(6,7-Dihydro-5H-[1]pyrindin-6-yl]-4-fluorobenzamide

RL: PAC (Pharmacological activity); PUR (Purification or recovery); SPN (Synthetic preparation); SPS (Uses)

(preparation of acylated, heteroacyl-condensed cycloalkenylamines for treatment of cardiovascular disorders)

654675-40-8 CRPUS

Benzamide, N-(6R)-6,7-dihydro-5H-cyclopenta[b]pyridin-6-yl]-4-fluoro-69CI) (CR INDEX NAME)

Absolute stereochemistry.

ANSWER 4 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN

654676-73-0 CAPLUS
Benzamide, Nr. (168)-6,7-dihydro-5H-cyclopenta[b]pyridin-6-yl]-4-fluoro-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

IT 654675-32-8P, (R)-N-[6,7-Dihydro-5H-[1]pyrindin-6-y1]-2,4dimethylbenzamide 654675-45-3P, N-[6,7-Dihydro-5H-[1]pyrindin-6y1]-2,6-dimethylnicotinamide 554675-50-0P, N-[6,7-Dihydro-5H[1]pyrindin-6-y1]-6-methoxynicotinamide 654675-56-6P,
2-Methyl-3H-benzimidazole-5-carboxylic acid
N-[6,7-dihydro-5H-[1]pyrindin6-y1]amide 654673-63-5P, N-[6,7-Dihydro-5H-[1]pyrindin-6-y1]-6methoxymethylnicotinamide 654675-72-6P 654675-81-7P
654675-89-5P, 2,4-Dimethyl-N-[6,7,8,9-tetrahydro-5Hcyclohepta[b]pyridin-8-y1]-benzamide 654676-59-2P,
(S)-N-[6,7-Dihydro-5H-[1]pyrindin-6-y1]-2,4-dimethylbenzamide
654676-68-3P, N-[6,7-Dihydro-5H-[1]pyrindin-6-y1]-4fluorobenzamide
RL: PAC (Pharmacological activity): SPN (Synthetic preparation); THU
(Therapeutic use); BIOL (Biological study): PREP (Preparation); USES
(Uses)

(Uses)

(preparation of acylated, heteroaryl-condensed cycloalkenylamines for treatment of cardiovascular disorders)

RN 654675-32-8 CAPLUS

CN Benzamide,
N-[(6R)-6,7-dihydro-5H-cyclopenta[b]pyridin-6-yl]-2,4-dimethyl(SCI) (CA INDEX NAME)

Absolute stereochemistry.

ANSWER 4 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

654675-72-6 CAPLUS
1,3-Benzodioxole-5-carboxamide, N-(6,7-dihydro-5H-cyclopenta[b]pyridin-6-yl)-2,2-difluoro-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN \654675-71-5 CMF C16 H12 F2 N2 O3

CM 2

CRN 76-05-1 CMF C2 H F3 O2

654675-81-7 CAPLUS
Benzamide, 4-chloro-N-(6,7-dihydro-5H-cyclopenta[b]pyridin-6-yl)-,
monottrifluoroacetate) (SCI) (CA INDEX NAME)

CM 1

CRN 654675-80-6 CMF C15 H13 C1 N2 O

L7 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

654675-45-3 CAPLUS
3-Pyridinecarboxamide, N-(6,7-dihydro-5H-cyclopenta[b]pyridin-6-yl)-2,6-dimethyl- (9CI) (CA INDEX NAME)

654675-50-0 CAPLUS
3-Pyridinecarboxamide, N-(6,7-dihydro-5H-cyclopenta[b]pyridin-6-yl)-6-methoxy-(9CI) (CA INDEX NAME)

654675-56-6 CAPLUS
1H-Benzimidazole-5-carboxamide, N-(6,7-dihydro-5H-cyclopenta[b]pyridin-6-yl)-2-methyl- (9CI) (CA INDEX NAME)

654675-63-5 CAPLUS
3-Pyridinecarboxamide, N-(6,7-dihydro-5H-cyclopenta(b)pyridin-6-yl)-6(methoxymethyl)- (9CI) (CA INDEX NAME)

ANSWER 4 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN CM 2 (Continued)

CRN 76-05-1 CMF C2 H F3 O2

F-C-CO2H

654675-89-5 CAPLUS Benzamide, 2,4-dimethyl-N-(6,7,8,9-tetrahydro-5H-cyclohepta[b]pyridin-8-yll- (9CI) (CA INDEX NAME)

654676-59-2 CAPLUS

NN 5045763-2 GFD03

CN Benzamide,
N-[(6S)-6,7-dihydro-5H-cyclopenta[b]pyridin-6-yl]-2,4-dimethyl(9C) (CA INDEX NAME)

Absolute stereochemistry.

654676-68-3 CAPLUS Benzamide, N-(6,7-dihydro-5H-cyclopenta[b]pyridin-6-yl)-4-fluoro- (9CI) (CA INDEX NAME)

THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT RE.CNT 8

ANSWER 5 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
2003:491183 CAPLUS
139:69523
Synthesis of tetrahydrocarbazole derivatives for use as ligands for
G-protein coupled receptors and antagonists of gonadotropin-releasing
hormone for treatment of disease
Koppitz, Marcus; Muhn, Hans Peter; Shaw, Ken; Hess-Stumpp, Holger;
Paulini, Klaus
Zentaris Ag, Germany
PCT Int. Appl., 114 pp.
CODEN: PIXXD2
Patent
German
CNT 1
PATENT NO. KIND DATE APPLICATION NO. DATE IN PA SO 20021216 K 20021216 20021216 20040514 20040526

ANSWER 5 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

Absolute stereochemistry

MARPAT 139:69525

548752-60-9 CAPLUS 1H-Carbazole-3-carboxamide, N-[(1S)-1-(aminocarbonyl)-2-methylpropyl]-3-[(12,3-dihydro-1H-inden-1-yl)carbonyl]amino]-2,3,4,9-tetrahydro-, (3S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry

L7 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

The invention relates to novel tetrahydrocarbazole derivs. [e.g., $\{I\}$] which act as ligands for G-protein coupled receptors (GPCR), especially

antagonists of gonadotropin-releasing hormone (GNRH), and pharmaceutical composition containing them. Furthermore, the invention relates to the administration of tetrahydrocarbazole derivs. for the treatment of

conditions mediated by GPCR, especially for the inhibition of GnRH, to

mammals estimated by Geo. especially for the immediate especially humans, requiring such treatment, and to the use of tetrahydrocarbazole derivs. for producing a pharmaceutical agent for treating pathol. conditions mediated by GPCR, especially for the inhibition of

oition of GRRH. Limited synthesis of intermediate materials is given, with many tables of products exemplified by general synthesis steps. Thus, beginning from 4,4-ethylenedioxycyclohexanone and phenylhydrazine, I was prepared in seven generalized steps. In in vitro tests with alpha T3-1 cells, I had IC50 for human GRRH of 1.5 x 10-8 M, with Ca2+ release of

x 10-8 M.
548752-58-59 548752-60-9P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of tetrahydrocarbazole derivs. for use as ligands for

G-protein

coupled receptors and antagonists of gonadotropin-releasing hormone for

treatment of disease)
548752-58-5 CAPLUS
1H-Carbazole-3-carboxamide, N-[(1S)-1-(aminocarbonyl)-2-methylpropyl]-3[[(2,3-dihydro-1H-inden-1-yl)carbonyl]amino]-2,3,4,9-tetrahydro-, (3R)(9CI) (CA INDEX NAME)

ANSWER 6 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
2001:693325 CAPLUS
135:257243
Preparation of condensed imidazoles as histamine H3 receptor ligands
Andersen, Knud Erik; Doerwald, Florencio Zaragoza; Sidelmann, Ulla Grove;
Rudolf, Klaus; Stenkamp, Dirk; Hurnaus, Rudolf; Mueller, Stephan Georg;
Krist, Bernd; Eriksen, Birgitte; Pesche, Bernd
Novo Nordisk A/S, Den.; Boehringer Ingelheim International G.m.b.H.
PCT Int. Appl., 170 pp.
CODEN: PIXXD2
Patent
English
CNT 1

CNT 1 PATENT NO. APPLICATION NO. KIND DATE DATE EP 1269484
R: AT, BE, CH,
IE, SI, LT,
JP 200327395
US 2003135056
US 6756384
PRAI DK 2000-441
DK 2000-1016
US 2000-193741P
US 2000-216553P
US 2001-B10237
WO 2001-DK188 20000629 20000331 20000707 WO 2001-DK188 MARPAT 135:257243 20010316

A novel class of imidazo heterocyclic compds. (shown as I (e.g. 4,5,6,7-tetrahydro-lH-benzimidazole-5-carboxylic acid [(1S)-(naphth-1-yl)ethyl)amide) as well as any optical or geometric isomer or tautomeric form thereof including mixts. of these or a pharmaceutically acceptable salt thereof), pharmaceutical compns. comprising them and use thereof in the treatment and/or prevention of diseases and disorders related to the histamine H3 receptor. In I: R1 is H or a functional group, which can be

L7 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN (Continued) converted to H in vivo. R2 is H, C1-6-alkyl, C1-6-alkythio, halogen, cyano, trifluoromethyl, hydroxy, thiol or amino. R3 and R4 independently are H or C1-6-alkyl, which is optionally substituted with aryl or heteroaryl, which are optionally substituted with the aryl or heteroaryl, hich are optionally substituted with one or more substitutents selected from nitro, -NR7RR, -S(0)2NR7RR, -C(0)NR7RR, hydroxy, halogen, cyano, trifluoromethyl, -Ocf3, -OcHF2, -OcHC2HF2, C1-6-alkyl, C2-6-alkeyl, C2-6-alkyl, C2-6-alkyl, C2-6-alkyl, C2-6-alkyl, C3-10-cycloalkyl, C3-

aryl-Ci-b-alkyl, neteroaryl-Ci b-alkyl, arylamino, neteroarylamino, l, heteroaroyl, arylsulfonyl, heteroarylsulfonyl, -C(:NOR7)aryl, -C(:NOR7)heteroaryl, arylthio, heteroarylthio, aryloxy and heteroaryloxy. R7 and R8 independently are H or Ci-6-alkyl. M is 0-2: n is 1-4: X is a valence bond, -O-, -S-, -S(O), -S(O)2 or -CF2-; p is 0-3: Y is valence bond, -O-, -S-, or -NR9-, wherein R9 is H or Cl-6-alkyl; V is :0, :S, :NR10 (R10 = H, cyano, nitro, Cl-6-alkyl); W is valence bond, -O-, -S-, -NR11- (R11 = H, Cl-6-alkyl) q is 0-3. Z is heteroaryl, aryl, aryloxy, C3-10-cycloalkyl, C3-8-heterocyclyl, C2-6-alkkyl, C2-6-alkenyl or C2-6-alkynyl, which are optionally substituted with various provisos. More particularly, the compds. are useful for the treatment and/or prevention of diseases and disorders in which an interaction with the histamine H3 receptor is beneficial. The claimed compds. generally show a high binding affinity aroyl,

the histamine H3 receptor, most preferably IC50 < 500 nM. Ninety-two example prepns. are included, but the methods of prepn. are not claimed. Pharmaceutical compns. contg. the compds. are claimed effective for redn. of Mt., suppression of appetite and treatment and/or prevention of eating disorders (e.g. bulimia, binge eating), impaired glucose tolerance (IGT), Type 2 diabetes, allergic rhinitis, ulcer, ancrexia, diseases and disorders related to the serotonin-3 receptor (5-HT3; e.g. emesis), diseases and disorders related to the vanilloid receptor (e.g. pain, neurogenic inflammation, obesity), and diseases and disorders related to the alpha-2 adenergic receptor (e.g. sleep inducing agent). 361394-45-29 361394-53-ep 361394-53-ep 361394-57-2P RIS 361304-57-2P RIS BS (Biological activity or effector, except adverse); BSU

ANSWER 6 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

• HCI

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT ANSWER 6 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN

• HCl

361394-49-2 CAPLUS Benzamide, 2-phenoxy-N-{4,5,6,7-tetrahydro-1H-benzimidazol-5-yl}-, monohydrochloride (9CI) (CA INDEX NAME)

● HCl

361394-53-8 CAPLUS
Benzamide, 4-chloro-N-(4,5,6,7-tetrahydro-1H-benzimidazol-5-yl)-,
monohydrochloride (9CI) (CA INDEX NAME)

1999:626041 CAPLUS 131:257447

RN 361394-57-2 CAPLUS CN Benzamide, 2-chloro-6-phenoxy-N-{4,5,6,7-tetrahydro-1H-benzimidazol-5-yl}-, monohydrochloride (9CI) (CA INDEX NAME)

ANSWER 7 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN

131:257447

Freparation of amide derivatives as nociception antagonists Shinkai, Hisashi; Ito, Takao; Yamada, Hideki Japan Tobacco Inc., Japan PCT Int. Appl., 113 pp. CODEN: PIXXD2

Patent Japanese
CNT 1 DT LA FAN. KIND DATE APPLICATION NO. DATE

All 19990330 WO 1999-JP1462 19990323
I, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MM, MW, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TH, TR, US, UZ, VH, YU, AZ, ZW
I, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, GM, GW, ML, MR, NE, SN, TD, TG
AA 199901018 AU 1999-24225638 19990323
All 19991018 AU 1999-242558 19990323
AL 20010121 AL 20010131 EP 1999-90320 19990323
DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, LV, FI, RO
TZ 20010621 TR 2000-200003598 19990323
A 20010921 BR 1999-9666 19990323
A 20021025 TW 1999-8866 19990323
A 20021025 TW 1999-88104619 19990323
B 20020521 TW 1999-88104619 19990323
B 20020521 TW 1999-88104619 19990323
B 20020521 TW 1999-88104619 19990323
B 20000125 DR 1999-0886 19990325
B 20000228
B 1 2002625 US 2000-646781 2000925
A 20001117 F1 2000-2103 2000925
A 20001127 NO 2000-4778 2000925
A 20010823 ZA 2000-5881 20001020
AL 20056067
AL 20060209 US 2005-145169 20050606
W 19990323
A 3 20000922
A 3 20000922
A 3 20000925
A 19980326
W 19990323
A 3 20000922
A 20000925
A 19980323
A 3 20000922 PATENT NO. KIND APPLICATION NO. DATE

chlorination of 2-[(4-ethylphenoxy)methyl]benzoic acid followed by condensation of the acid chloride with 4,6-diamino-2-methylquinoline

ANSWER 7 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN (Continued) after treatment with 1N HCl, 59% N-(4-amino-2-methyl-6-quinolyl)-2-[(4-ethylphenoxylmethyl)benzamide hydrochloride (II). II showed analgesic activity at 1 mg/kg orally in mice. 244219-82-7P

RI: BAC (Biological activity or effector, except adverse); BSU (Biological

logical study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of amide derivs. as nociceptin antagonists) 244219-82-7 CAPLUS Benzamide, N-(4-amino-5,6,7,8-tetrahydro-6-quinolinyl)-2-[(4-chlorophenoxy)methyl]-, monohydrochloride (9CI) (CA INDEX NAME)

• HC1

THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT RE.CNT 3

ANSWER 8 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN CMF C4 H4 O4 (Continued)

Double bond geometry as shown.

AN DN TI IN

ANSWER 8 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
1997:85131 CAPLUS
126:104085
Preparation of benzoic acid derivatives as 5-HT4 receptor agonists
SUZUKİ, Takeshi; Iwaoka, Kyoshi; Naito, Makoto; Myata, Keiji; Kamato,
Takeshi; Oota, Mitsuaki
Yamanouchi Pharma Co Ltd, Japan
Jpn. Kokai Tokkyo Koho, 25 pp.
CODEN: JKXXAF

Patent

Japanese

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI JP 0832523		19961210	JP 1995-131264	19950530	
PRAI JP 1995-13	1264	19950530			

PRAI JP 1995-131264 19950530

S MAPRAT 126:104085
GI For diagram(s), see printed CA Issue.

AB The title compds. (Ia and Ib; Im = imidazolyl ring; A ring = 4-8 numbered cycloalkyl; n = 0-2; R2, R5, R6 = H, alkyl; B ring = 4-8 numbered N-containing heterocyclyl; R3 = halo; R4 = lower alkoxy) are prepared I, possessing 5-HT4 receptor antagonism, are useful for prevention and treatment of central and peripheral nervous system, digestive system, cardiovascular system, and urinary system diseases. Thus, 6-(tert-butoxycarbonylamino)-5,6,7,8-tetrahydroimidazol1,2-alpyridine was treated with aqueous HCl to give

give the title compound 6-amino-5,6,7,8-tetrahydroimidazo[1,2-a]pyridine. I showed 5-HT4 receptor antagonism.

IT 185796-81-09
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of benzoic acid deriva. as 5-HT4 receptor agonists)
RN 185796-81-0 CAPIUS
CN Benzamide, 4-amino-5-chloro-2-methoxy-N-(4,5,6,7-tetrahydro-1H-benzimidazol-5-yl)-, (ZE)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CRN 185796-80-9 CMF C15 H17 C1 N4 O2

СМ

CRN 110-17-8

ANSWER 9 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
1991:228759 CAPLUS
114:228759 CAPLUS
114:228759 CAPLUS
114:228759 CAPLUS
114:228759 CAPLUS
116:21875 CAPLUS
116

FAN.	CNT	1					
	PAT	TENT NO.		KINI	DATE	APPLICATION NO.	DATE
PI	GB	2230007		A1		GB 1990-7889	19900406
	GB	2230007		B2	19921014		
	ΑU	9052971		A1	19901011	AU 1990-52971	19900405
	ΑU	625845		B2	19920716		
	ZA	9002662				ZA 1990-2662	19900405
	IL	94011		A1		IL 1990-94011	19900405
	CA	2014062		AA	19901007	CA 1990-2014062	19900406
	CA	2014062		С	20000613		
	EΡ	395244		A1	19901031	EP 1990-303708	19900406
	EΡ	395244		B1	19970219		
		R: AT, E	E, CH,	DE,	DK, ES, FR,	GR, IT, LI, LU, NL, S	E
	JΡ	02290852		A2	19901130	JP 1990-92961	19900406
	JΡ	2945064					
	ΗU	54658		A2	19910328	HU 1990-2108	19900406
		217128			19991129		
		5075303			19911224		19900406
	DD	298391			19920220	DD 1990-339534	19900406
		95373		В	19951013	FI 1990-1761	19900406
	FI	95373		С	19960125		
	ΑT	149031		E	19970315	AT 1990-303708	19900406
	ES	2099703		Т3	19970601	ES 1990-303708	19900406
	KR	156569		В1	19981116	KR 1990-4697	19900406
		217805		В	20000428		
		5194439			19930316	US 1991-765282	19910925
PRAI		1989-7865		A	19890407		
	ΗU	1990-2108		A	19900406		

HU 1990-2108 A 19900406 US 1990-505957 A3 19900406 CASREACT 114:228759; MARPAT 114:228759

ANSWER 9 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
The title compds. [1: R = H, HO, alkyl, alkoxy, halo, CF3, NO2,
(alkyl)amino, dialkylamino; Rl = H, alkyl: R2 = R1, (CH2)nR3, etc.; R1R2N
= (un)substituted pyrrolidino, piperdino, piperaino, etc.; R3 = aryl,
benzodioxinyl, cyano, OR4, CO2R5, NR6R7, etc.; R4 = H, alkoxycarbonyl,
aryl(alkyl); R5 = H, alkyl, phenylalkyl; R6, R7 = H, alkyl, aryl(alkyl),
etc.; R6R7N = Q, Q1, etc.; n = 1-6; p = 1, 2; z = 0-2), their heteroarcm.
N-oxides or pharmaceutically acceptable salts, useful for the treatment
of. e.g., anxiety, enorexia, and hypertension (no data), were prepared
thus, the addition reaction of PrNNOH-HC1 with 5,6-dihydroquinoline by
stirring for 1 h with ice-cooling, followed by reduction of the adduct of
Ticl3 in Hc1/MeOH gave 5,6,7,8-ternaydro-7-(1-propylamino)quinoline.
Cyanomethylation of the latter by heating for 1 h at 100° with
CICH2CN in DMF and reduction of the product by H over Raney Ni in
irated

ethanolic NH3 gave the aminoethyl intermediate (I; R=H, R1=Pr, z=1) (II; R2=CH2CH2NH2). This was stirred 0.5 h with 4-FC6H4COCl and Et3N

in

CH2Cl2 to give title compound (II; R2 = CH2CH2NHCOC6H4F-4) which in vitro (rat hippocampal membrane homogenate) had IC50 of 9 nM for binding on 5-HT1A receptors.

IT 133092-48-5P RI: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (preparation and reaction of, in preparation of hydroxytryptamine antagonist and (partial) agonist)

RN 133092-48-5 CAPIJUS

RN 134-Benzodioxin-2-Carboxamide, 2,3-dihydro-N-(5,6,7,8-tetrahydro-7-quinolinyl)- (9CI) (CA INDEX NAME)

ANSWER 10 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN (Continued) g. (crude) Bu ester (VI) of V, m. 273.5-4.5° (hot Methyl Cellosolve), Rad 1.48 (9:1 Methyl Cellosolve-HZO, solvent B); in a larger run the yield of VI, m. 265-6°, was 88% VI (6.0 g.) in 70 cc. (MeOCH2CH2)20 added with stirring to 6.06 g. AlCl3 and 5.16 g. NaBH4 in

(MeOCH2CH2)20 during 35 min. at 20-2°, stirred 65 min. at 5°, poured onto about 100 g. ice, the mixt. treated with 6 cc. cd. H2SO4, adjusted to pH 5 with 46 cc. 10% NaOH and evapd. in vacuo

60°, the residue powdered and extd. 10 hrs. with 800 cc. abs. MeOH in a Soxhlet app., the ext. evapd., the residual crude sulfate (9,77 cd dissolved in 66 cc. H2O, the soln. filtered, the filtrate adjusted wit satd. aq. Na2CO3 to pH 9, and the mixt. chilled gave 3.78 g. 6-CH2OH analog (VII) of V, m. above 300°, Rad 1.00 (solvent B), 1.51 (solvent A), 1.00 (solz:3 BUGH-ACOH-H2O, solvent C); picrate of VII m. 209-11° (H2O). VII (0.45 g.), 3 cc. dry C5H5N, and 1.5 cc. Ac2O heated 1h. at 85°, didd. with 20 cc. H2O, and chilled yielded 0.42 g. (crude) 2-acetamido-6-acetoxymethyl-5,6,7,8-tetrahydro-4-hydroxyquinazoline, m. 207.5-10° (Methyl) Cellosolvely, Rad 1.45 (solvent C). p-MeC6H4SO2Cl (0.21 g.) in 1.6 cc. C5H5N added dropwise

stirring to 0.20 g. VII in 1.5 cc. C5H5N, stirred 1.3 hrs. at 0°, and poured into 25 cc. ice and H2O yielded 0.05 g. 2-amino-5,6,7,8-tetrahydro-4-hydroxy-6-(p-toluenesulfonyloxymethyl)quinazoline, m. 212-13.5° (aq. Methyl Cellosolve). SoC12 (80 g.) added slowly with cooling to 5.00 g. VII and 2.5 g. dry C5H5N during 15 min., refluxed 130 min., concd. in vacuo to 1/4 the original vol., poured with stirring onto 200 g. ice, filtered, adjusted with 10% aq. NaOH to pH 6-7, and filtered yielded 4.32 g. 6-C1CHZ analog (VIII) of V, m. 287-8.5° (Methyl) Cellosolve). VIII (0.54 g.), 2.0 g. N-(p-aminobenzoyl)-L-glutamic acid (IX), 5.0 cc. Bu Cellosolve, and a trace of NaI refluxed 13 hrs., cooled, dild. with 100 cc. EtZ0, filtered, the residue washed with EtZ0, stirred to soln. with 5 cc. N NaOH, treated with Norit, filtered, adjusted to pH

with N HCl, and filtered gave 0.78 g. crude N-[[[(2-amino-5,6,7,8-tetrahydro-4-hydroxy-6-quinazolinyl)methyl]amino]benzoyl]-L-glutamic acid (5,8-dideaza-5,6,7,8-tetrahydrofolic acid) (X), m. 188-210*; about 0.15 g. crude X in 10 cc. satd. aq. NaHCO3 treated with Norit and adjusted

to pH S with N HCl, the ppt. extd. with hot C5H5N (80), and the ext.

with 50 cc. Et20 gave purified X, m. 199-202*. X (10 mg.) heated 1 hr. at 100* with 2 cc. 4N HCl and chromatographed on paper with solvent C gave a spot for L-glutamic acid, Rad 0.53. VIII (0.54 g.),

g. p-ClC6H4NH2, 5.0 cc. Butyl Cellosolve, and a trace NaI refluxed 15 hrs., cooled, dild. with 100 cc. Et20, filtered, the residue washed with Et20 and H20, the crude product (0.16 g.) dissolved in N HCl and centrifuged, the supernatant neutralized with aq. NaHCO3, the ppt. washed with H20, dissolved in 6 cc. hot Ne Cellosolve, treated with Norit, and repptd. with H20 gave 0.02 g. 6-(p-ClC6H4NHCH2) analog of V, m. 229-31° with darkening at 190°, Rad 1.38 (solvent C). SOC12 (16.4 g.) added dropwise to 0.90 g. V and then with 0.35 g. C5H6N, red stirred

3.75 hrs. at room temp., dild. with 30 cc. dry Et20, cooled, filtered,

the residue washed with 20 cc. dry Et2O yielded 6-chloroformyl analog

of V.HCl. XI.HCl from 0.50 g. V in 30 cc. Et20 treated 20 min. with dry NH3 and filtered, the residue washed with 10 cc. Et20 and H2O, dried (0.55

L7 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN N 1959:51174 CAPLUS DN 53:51174 CAPLUS COPYRIGHT 2006 ACS on STN OREF 53:9232a-i,9233a-i,9234a-b T1 Potential anticapear account

D3:9232a-1,923a-1,923a-D Potential anticancer agents. IX. Tetrahydroquinazoline analogs of tetrahydrofolic acid. 1 Koehler, Ruth; Goodman, Leon; DeGraw, J.; Baker, B. R. Stanford Research Inst., Menlo Park, CA Journal of the American Chemical Society (1958), 80, 5779-86 CODEN: JACSAT; ISSN: 0002-7663

Journal Unavailable

Unavariable CASREACT 53:51174 CH2:CHCN (53 g.) added dropwise with stirring to 80 g. CH2(CO2Et)2 and

Cc. Me3COH at 30-5° during 50 min., stirred 2 hrs., kept at room temperature overnight, treated with stirring and cooling with dilute HCl to pH 3, poured onto 500 g. ice, and filtered yielded 129 g. (NCCH2CH2)2C(COZEt)2 (1), m. 63.5-66*. I (128.2 g.) and 550 cc. 6N HCl refluxed 20 hrs., evaporated, extracted with Me2Co, the extract filtered, and evaporated gave 108.5 g. HOZCCH(HCZCH2COZH)2 (II), m. 114-15*. II (107 g.), 149.8 g. absolute MeOH, 468 cc. (CHZCL)2, and 4.7 cc. concentrated HZSO4 refluxed 53 hrs. and the organic layer worked up yielded 92.8 g. tri-Me ester (III) of II, b0.05

118-20°. III (400 g.), 100 g. NaOMe, and 1900 cc. dry C6H6 refluxed 6 hrs. with stirring, treated with stirring and cooling with 200 cc. glacial AcOH in 2500 cc. H2O, the aqueous layer extracted with C6H6, the

ne combined exts. worked up yielded 197.8 g. 2,4-dicarbomethoxycyclohexanone (IV), b5 135-8°, and 44.4 g. III. III (20.0 g.) treated in exactly the same manner, the cooled mixture added to 45 cc. glacial AcOH in 320

the same manner, the cooled mixture added to 45 cc. glacial ACOH in 320 cc. cold H2O, the aqueous layer extracted with C6H6, the extract washed with H2O, extracted with 38 aqueous NaOH, the basic extract added immediately to 20 cc. ACON in 100 cc. H2O and extracted with C6H6, and the extract worked up yielded 12.1 g. IV, m. 41-3*. A similar run with NaH (27.2% suspension in mineral oil) as the condensing agent yielded 59% IV, m. 42-3*. IV (2.14 g.), 1.53 g. H2NC(: NH)NH2.HCl, and 1.8 g. NsONe in 32 cc. MeOH refluxed 3 hrs., kept overnight, treated with 7 cc. 50% aqueous NaOH, refluxed 75 min., acidified with AcOH, filtered, and the crude product (2.19 g.) repptd. from aqueous saturated NaHCO3 with dilute HCl yielded 2-amino-5, 6, 7,8-tetahydro-4-hydroxygutnazoline-6-carboxylic acid (V), Rad 1.82 (5% aqueous Na2HPO4, solvent A). V (3.0 g.) and 60 cc. Ac2O heated 3 hrs. at 135-50*, poured onto 100 g. ice, filtered, and the filtrate evaporated in vacuo cc. yielded 2.74 g. N-Ac derivative of V, m. above 300*. V (0.21 g.)

oc. yielded 2.74 g. N-Ac derivative of V, m. above 300°. V (0.21 g.) and 0.30 g. p-Mec6H4SO3H.H2O in 15 cc. BuOH heated 1.25 hrs. with slow distillation of the BuOH, the residue treated with 10 cc. each saturated

and C6H6, and the upper layer (containing suspended solid) worked up gave 0.27

ANSWER 10 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN (Continued) g.1, heated with stirring in 10 cc. satd. aq. NaHCO3, washed with H2O, dried, dissolved in 40 cc. cold 0.1N HCl, filtered, and neutralized with aq. NaHCO3 yielded the amide of V.0.5M2O, m. above 300°, Rad 1.53 (solvent A), 0.80 (solvent B), 0.71 (solvent C). XI from 0.20 g. V addet to 0.56 g. p-ClC6HANNE2 in 6 cc. dry MeZCO, stirred 3 hrs., dild. with 5 cc. Et2O, filtered, the residue washed with 8t2O and H2O, the crude product (0.22 g.) heated with stirring in 5 cc. satd. aq. NaHCO3, filtered, washed with H2O, dissolved in 15 cc. HCONMeZ, filtered, dild.

incipient turbidity with H2O, and chilled yielded 0.10 g. 2-amino-6-{p-chlorophenylcarbamoyi)-5,6,7,8-tetrahydro-4-hydroxyquinazoline (XII), Rad 1.33 (solvent B). Similarly were prepd.

following analogs of XII (% yield given): diethylcarbamoyl 35, o-chlorophenylcarbamoyl 34, 3,4-dichlorophenylcarbamoyl 35, o-chlorophenylcarbamoyl 55, p-fluorophenylcarbamoyl 50. XI (0.42 g.) from 0.42 g. V added in small portions during 0.5 hr. to 0.53 g. IX in 4 cc. C5HSN at 0°, stirred 2 hrs. at room temp., kept overnight, added to 100 g. ice, and centrifuged gave V, the supernatant concd. in vacuo to about 25 cc. and the crude solid (0.74 g.) recrystd. from 40 cc. hot HZO yielded 0.06 g. N-(p-(12-amino-5,6,7,8-tetrahydro-4-hydroxy-6-quinazolinyl)carbamoylaminoj-benzoyl-1-glutamic acid (XIIa), m. 221-3°. Abs. MeON (10 cc.) and 0.30 g. AeCl kept 10 min. at 0°, treated with 1.00 g. IX and then 1.0 cc. AeCl, refluxed 10 min., evapd. in vacuo, the residue treated with 10 cc. HZO, adjusted to

8 with concd. NH4OH, and the ppt. cooled and dried gave 0.89 g. di-Me ester (XIII) of IX, m. 110-12.5° (EtOH-Et2O), Rad 2.18 (solvent A). XI from 0.21 g. V added to 0.29 g. XIII in 2 cc. dry C5HN, stirred overnight, dild. with 5 cc. H2O, evapd. to dryness, the residue slurried with 28 cc. H2O, 15 cc. hot satd. aq. NaHCO3, and 20 cc. H2O, and the crude product (0.30 g.) recrystd. from HCONNe2-MeOH and then aq. HCONMe2 yielded 47% di-Me ester of XIIa, m. 285-5.5°, Rad 1.34 (solvent B). 1.60 (solvent C). XI from 4.2 g. V added in small portions with stirring to 3.4 g. Et-SH in 40 cc. dry pyridine, stirred at room temp. overnight, poured into 600 cc. iced H2O, filtered, and the brown residue (4.1 g.) recrystd. from 350 cc. H2O and 175 cc. Methyl Cellosolve gave 3.3 g.

cryst. material, darkens near 220°, softens near 260°, and does not show a definite m.p. to 300°; a 0.26-g. sample stirred with 30 cc. 0.1NHCl and filtered, the filtrate neutralized with aq. NAHCO3, and the ppt. recrystd. from 28 cc. Me Cellosolve gave 0.07 g.

Et 2-amino-5,6,7,8 - tetrahydro - 4 - hydroxyquinazoline - 6 - thiolcarboxylate (XIV), appeared to sublime near 245*, Rad 1.35 (solvent C). XI from 4.62 g. V, 11.0 cc. PhSH, and 44 cc. pyridine gave 5.55 g. Ph ester analog of XIV, did not melt below 300*. VI (1.00 g.) and 4 cc. 85% N2H4.H2O refluxed 80 min. with stirring and evapd. in vacuo, the solid residue washed with cold H2O, and a 0.20-g. sample of

product (0.84 g.) recrystd. from 30 cc. HCONNe2 and 22 cc. H2O with C yielded carbohydrazide (XV) of V. NaNO2 (1.04 g.) in 20 cc. H2O added dropwise with attirring and cooling to 2.66 g. XV in 9.3 cc. glacial AcOH, 9.3 cc. glacial AcOH, and 46 cc. H2O during 10 min., stirred 1 hr., added dropwise with attirring to 50 cc. 1.5N HCI at 55 udring 10 min., stirred 45 min. at 55 adjusted to pH 7 with satd. aq. Na2CO3, and added to 5.0 g. picric acid in 350 cc. H2O gave the dipicrate (XVI) of 2.6-diamino-5.67,8-tetrahydro-4-hydroxyguinazoline (XVII); it has no definite m.p., but slowly darkens and is completely decompd. at 285°. XVI (1.00 g.) in 20 cc. H2O and 50 cc. C6H6 treated with 2.6

L7 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN (Continued) cc. concd. HCl, the aq. layer washed with C6H6 and evapd. In vacuo, the crude residue dissolved in 60 cc. abs. HeOH and filtered, and the filtrate did. with 200 cc. dry Et20 pptd. 0.54 g. XVII.2HCl, m. 272-3*, Rad 2.28 (solvent A), 0.52 (solvent C). XVII.2HCl (0.40 g.) and 0.58 g. NaHCO3 in 10 cc. H2O treated with stirring with 0.34 g. p-FC6H4SO2Cl, stirred 21 hrs. at room temp., and filtered gave 0.46 g. crude product; a 0.34-g. sample recrystd. with C from aq. HCONNe2, dissolved in 5 cc. N NaOR, decolorized with Norite, filtered, and the filtrate adjusted to pH 6-7 with N HCl gave 0.22 g. pure N-(2-amino-5,6,7,8-tetrahydro-4-hydroxy-6-quinazolinyl)-p-fluorobenzenesulfonamide, m. above 300°. XVII.2HCl (0.40 g.) and 0.58 g. NaHCO3 in 10 cc. H2O treated with stirring with 0.36

g. 3,4-C12C6H3COCl, stirred 22 hrs. at room temp., filtered, and the crude

Pproduct (0.53 g.) recrystd. from aq. HCONMe2 yielded 0.37 g.
N-(2-amino-5,6,7,8-tetrahydro-4-hydroxy-6-quinazolinyl)-3,4dichlorobenzamide, m. above 300°.
5452-18-6, 4-quinazolinol, 2-amino-6-(3,4-dichlorobenzamido)5,6,7,8-tetrahydro(preparation of)
5452-18-6 CAPLUS
Benzamide, N-(2-amino-5,6,7,8-tetrahydro-4-hydroxy-6-quinazolinyl)-3,4dichloro- (8CI) (CA INDEX NAME)

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L8			30	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	"STROBEL HARTMUT"/AU
L9			27	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	"WOHLFART PAULUS"/AU
L10			48	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L8 OR L9
L12			1	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L10 AND CYCLOALKENYL?

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ANSWER 1 OF 1 CAPLUS COPYRIGHT 2006 ACS on STN 2004:117214 CAPLUS 140:163869
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Preparation of acylated, heteroaryl-condensed cycloalkenylamines
for treatment of cardiovascular disorders
Strobel, Hartmut; Wolfart, Paulus
Aventis Pharma Deutschland GmbH, Germany
Eur. Pat. Appl., 35 pp.
CODEN: EPXXXW
 DT Patent
LA English
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PATENT NO.
                         English
CNT 1
PATENT NO.

EP 1389342

R: AT, BE, CH, DE, DK, ES, FR, GB, GB, IT, LI, JU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK
CA 2494302

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W1: AE, AG, AL, AM, AT, AL, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
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GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KR, KZ, LC, LK, LR,
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AU 2003251466

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BR 2003013240

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BR 2003013240

A 20050927

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C 20030724

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BR 2003013240
JP 2005538124
US 2004092513
NO 2005000830
PRAI EP 2002-17586
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WO 2003-EP8103
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L12 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

L12 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
AB The title compds. (I) [the ring A = an aromatic 5-membered or 6-membered ring containing 1 or 2-nitrogen atoms as ring heteroatoms, or an aromatic ring containing 1 ring heteroatom which is an oxygen atom or a sulfur or 2 ring heteroatoms one of which is a nitrogen atom and the other of which is an oxygen atom or a sulfur atom; R1, R4 = H, each (un)substituted C1-10 o alkyl, C2-10 alkenyl, or C2-10 alkynyl, COR9, CONR1OR11, CO2R12, CF3, halogens, cyano, NR13R14, OR1, S(O)mR16, SO2NR17R18, NO2: R1 and R4 be halogen, cyano or NO2 if Rl or R4 is bonded to a ring nitrogen atom; R2, R3 = H, halogens, cyano, (un)substituted C1-10 alkyl, PhCONH, Ph502-0 z-O, (C1-6 alkyl)-CO, or PhCO, OH, C1-10 alkoxy, PhO, S(0)mR19, CF3, cyano, NO2, C1-10 alkylamino, di{C1-10 alkyl}amino, (C1-6 alkyl)-CONH; but R2 R3 cannot be halogen, cyano or NO2 if R2 or R3 is bonded to a ring nitrogen atom; R5 = (un)substituted Ph, naphth-1-y1, naphth-2-y1, a 5-membered to 10-membered, aromatic, monocyclic or bicyclic heterocycle containing one or more heteroatoms selected from the group consisting of N. O and S; R9 = (un) substituted C1-10 alkyl; R10, R12, R17 = H, (un) substituted C1-10 alkyl; R11, R18 = H, C1-10 alkyl; R13, R14 = H, C1-6 alkyl, each (un) substituted Ph, benzyl, heteroaryl, (C1-6 alkyl)-CO; R16 (un) substituted C1-10 alkyl, CF3, each (un) substituted Ph or heteroaryl; = 0, 1, 2; n = 1, 2, 3) are prepared These compds. upregulate the expression of the enzyme endothelial nitric oxide (NO) synthase and can expression of the enzyme endothelial nitric oxide (NO) synthase and can be applied in conditions in which an increased expression of said enzyme or an increased NO level or the normalization of a decreased NO level is desired. They are useful in the treatment of various disease states including cardiovascular disorders such as atheroaclerosis, thrombosis, coronary artery disease, hypertension, and cardiac insufficiency. The diseases also include stable or unstable angina pectoris, coronary heart disease, Prinzmetal angina, acute coronary syndrome, heart failure, myocardial infarction, stroke, peripheral artery occlusive disease, endothelial dysfunction, restenosis, endothelial damage after PT-CA, essential hypertension, plumonary hypertension, secondary hypertension, renovascular hypertension, chronic glomerulonephritis, erectile dysfunction, ventricular arrhythmia, diabetes, diabetes complications, nephropathy, retinopathy, angiogenesis, asthma bronchiale, chronic renal fallure, cirrhosis of the liver, osteoporosis, restricted memory performance or a restricted ability to learn, or for the lowering of cardiovascular risk of postmenopausal women or of women taking contraceptives. For example, 2,4-dimethyl-N-(6,7,8,9-tetrahydro-SH-cyclohepta(b)pridin-8-yll-henzamide (II) inhibited activation of human endothelial nitric oxide synthetase gene cloned in human endothelial cell line with ECSO of 0.054 µM.

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L10		48	SEA A	ABB=ON	PLU=	:ON	L8 (OR LS	9		
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L12		1	SEA A	ABB=ON	PLU=	ON.	L10	AND	CYC	LOAI	KENYL?
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